

OVER 200
STANDARD
MODELS



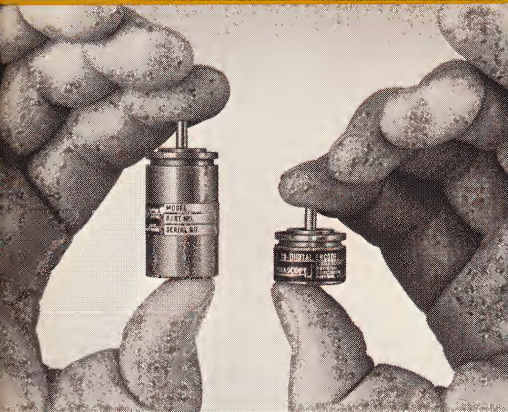
SHAFT
POSITION-TO-DIGITAL
ENCODERS

NO OTHER LINE SO COM-
PLETE ... SO RELIABLE
SIZE 8 • NATURAL BINARY
BINARY-CODED DECIMAL
NONCONTACT MAGNETIC
GRAY CODE • NONLINEAR

LIBRASCOPE

Librascope size 8 encoders are particularly suitable for use in aircraft, missile, and other systems where space and weight limitations are critical. Low-torque and inertia features make the size 8 units desirable also for high-speed servo systems. The output code is in standard V-scan binary code.

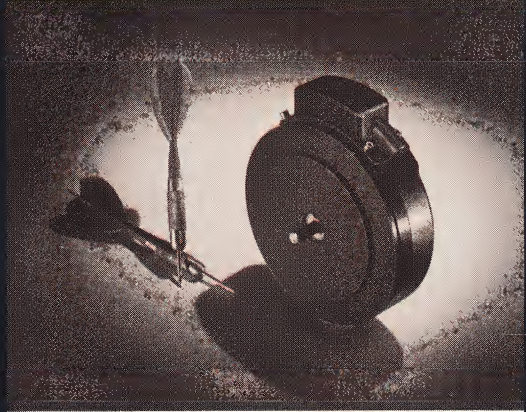
SIZE 8



MODEL	RESOLUTION (BITS/TURN)	FULL-SCALE CAPACITY (BITS)	WEIGHT (OZ.)	DIMENSIONS (DIA. x LENGTH)*
707-8	7	7	1.0	0.75" x 0.603"
713-8	7	13	1.8	0.75" x 1.345"
719-8	7	19	2.8	0.75" x 2.093"

These binary encoders are used in navigation, fire-control, inertial-guidance, and process-control applications. They feature a V-scan brush system, which eliminates digital ambiguity. In Models 737-18, 743-18, and 749-18, external circuitry to perform the V-scan brush selection is not required. Both true and complement outputs are available. This provides an ideal error-checking arrangement.

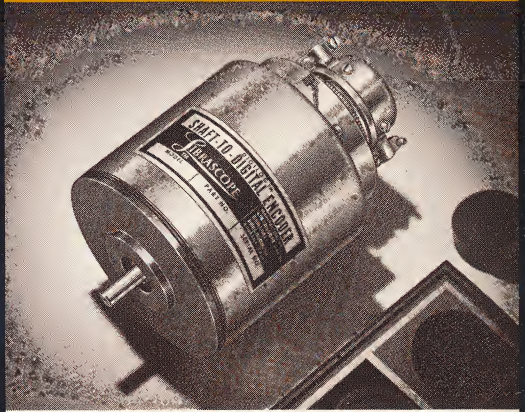
NATURAL BINARY



MODEL	RESOLUTION (BITS/TURN)	FULL-SCALE CAPACITY (BITS)	WEIGHT (OZ.)	DIMENSIONS (DIA. x LENGTH)*
707-18	7	7	4.0	1.75" x 1.46"
707-20	7	7	6.0	2.00" x 1.31"
710-42	10	10	20.0	4.19" x 1.424"
713-18	7	13	6.202	1.75" x 2.69"
713-20	7	13	8.0	2.00" x 2.49"
719-18	7	19	8.3	1.75" x 3.79"
719-20	7	19	11.0	2.00" x 3.66"
737-18	7	7	4.0	1.75" x 1.46"
743-18	7	13	6.2	1.75" x 2.69"
749-18	7	19	8.3	1.75" x 3.79"

BCD encoders are designed for applications requiring decimal-coded visual readout, as in wind-tunnel instrumentation. They are also widely used in machine tool control. Providing an 8-4-2-1 BCD code, these encoders use a modified V-scan brush system.

BINARY-CODED DECIMAL



MODEL	RESOLUTION (COUNTS/ TURN)	FULL-SCALE CAPACITY (COUNTS)	WEIGHT (OZ.)	DIMENSIONS (DIA. x LENGTH)*
722-31	200	200	9.0	3.062" x 1.861"
723-31	200	2,000	22.0	3.062" x 3.547"
724-31	200	20,000	22.0	3.062" x 3.547"
733-31	200	3,600	22.0	3.062" x 3.547"
734-31	200	36,000	31.0	3.062" x 5.078"
735-31	200	360,000	31.0	3.062" x 5.171"

LIBRASCOPE'S ENCODERS ARE DESIGNED TO MEET RIGID MILITARY ENVIRONMENTAL SPECIFICATIONS.

Noncontact magnetic encoders were developed to meet high-speed, long-life performance requirements of advanced computer systems. These encoders can operate at speeds up to 10,000 rpm. Service-life is limited only by durability of the bearings. Models 887-18, 893-18, and 899-18 feature standard U-scan binary code. Models 857-23 and 862-31 are incremental encoders which provide a pulse-train output.

NONCONTACT MAGNETIC

Librascope complete line of Gray Code encoders ranges from size 11 to size 31 standard BuOrd synchro mount. Resolutions range from 8 to 10 bits per turn. These Gray encoders are used in systems requiring a minimum number of transmission lines for the digital output.

GRAY CODE

Sine-cosine encoders provide a binary representation of both sine and cosine of the input shaft angle. These encoders are especially applicable in navigation systems, gyro systems, and radar-antenna indication. They feature a modified V-scan brush system.

NONLINEAR



MODEL	RESOLUTION (BITS/TURN)	FULL-SCALE CAPACITY (BITS)	WEIGHT (OZ.)	DIMENSIONS (DIA. x LENGTH)*
770-31	10	10	9.0	3.062" x 1.640"
778-11	8	8	2.0	1.071" x 0.760"
778-18	8	8	4.0	1.75" x 1.553"
778-31	8	8	9.0	3.062" x 1.640"
779-31	9	9	9.0	3.062" x 1.640"

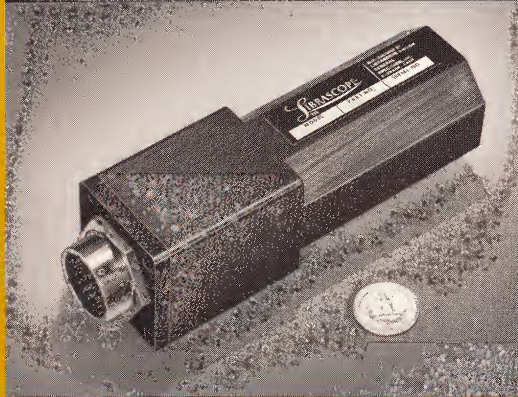
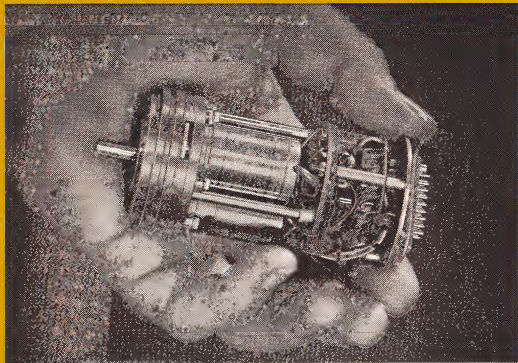
MODEL	RESOLUTION (BITS/ QUADRANT)	FULL-SCALE CAPACITY (BITS)	WEIGHT (OZ.)	DIMENSIONS (DIA. x LENGTH)*
757-24	7	7	16.0	2.375" x 2.872"
758-42	8	8	34.0	4.1875" x 3.734"

MODEL	RESOLUTION (PULSES/ TURN)	FULL-SCALE CAPACITY (BITS)	WEIGHT (OZ.)	DIMENSIONS (DIA. x LENGTH)*
857-23	256		7.0	2.25" x 1.25"
862-31	4096		9.0	3.062" x 1.640"

MODEL	RESOLUTION (BITS/TURN)	FULL-SCALE CAPACITY (BITS)	WEIGHT (OZ.)	DIMENSIONS (DIA. x LENGTH)*
887-18	7	7	5.0	1.75" x 1.56"
893-18	7	13	8.0	1.75" x 2.725"
899-18	7	19	11.0	1.75" x 3.66"

*All lengths exclude connector and shaft.

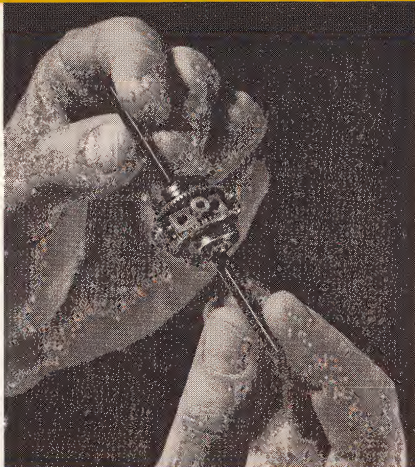
In addition to the complete line of encoders, Librascope offers a variety of miniature servo systems...



SERVO-DRIVEN ENCODERS

Librascope miniature servos are high-performance electromechanical systems designed for a variety of applications, including both analog-to-digital and digital-to-analog conversion. Input can be 400-cycle, 3-phase; 400-cycle, 1-phase; or DC.

Also available is a wide variety of servo-driven encoders which can perform linear analog-to-digital conversions as well as sine-cosine functions. The servo system can be modified to generate other non-linear digital representations of inputs.



DIFFERENTIALS

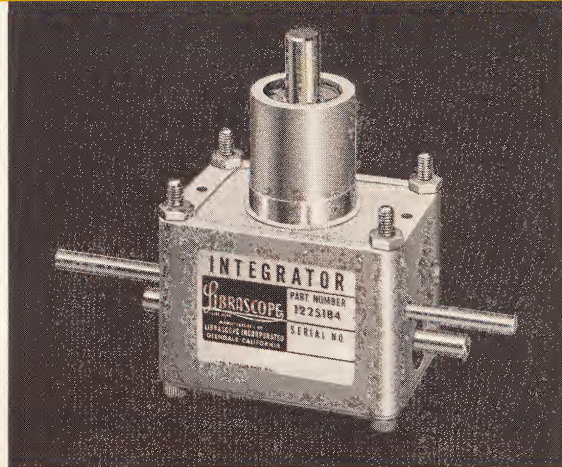
Librascope hollow-shaft differentials are small, rugged units which are widely used in servo systems, control devices, or as pure computing elements. The units are designed for reliable operation under extreme environmental conditions.



DIGILOG* 1011

The DIGILOG 1011 is a solid-state voltage-to-digital/digital-to-voltage converter which produces a 10-bit binary output plus polarity indication. It is especially designed as a reliable input source/output instrument for computers, data logging systems, and storage units.

*TRADEMARK, GENERAL PRECISION, INC.



BALL-AND-DISC INTEGRATORS

The Librascope high-torque ball-and-disc integrator is a precision mechanical integrating device which may be used as a computing element, variable speed changer, or control device. It is a rugged, versatile, low-cost unit with a 10,000-hour service-life expectancy.



SERVO AMPLIFIERS

Librascope ultraminiature servo amplifiers are available in three models, depending upon power and size required. They will drive 400 cps, center-tap servomotors (sizes 5 to 18). Power ratings range from 2 to 85 watts. They are designed for highly reliable performance in the -55°C . to $+125^{\circ}\text{C}$. temperature range.

COMMERCIAL COMPUTER DIVISION

GP GENERAL PRECISION

INFORMATION SYSTEMS GROUP

COMPONENTS BRANCH / 100 E. TUJUNGA AVE.
BURBANK, CALIFORNIA • VICTORIA 9-6061

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DETAILED ENGINEERING DATA SHEETS AVAILABLE ON REQUEST.